

2.14 SPECKS OF LOW SENSITIVITY OBSERVED IN WAC CL1/VIO FILTER COMBINATION

Reference 2.14-1 - ISSDFM# 387-GF-95-564, "Report on Cassini ISS CCD Lumogen Film Problem", J. Perry, N. Mardesich, G. Frascetti, T. Elliot, J. Janesick, T. McKann, and S. Chung, dated October 3, 1995

The WAC FM light transfer curve data showed specks of low sensitivity for the CL1/VIO filter combination. This was not observed for the other WAC filter combinations, nor with the NAC data. Suspect is the CCD Lumogen coating for the following reasons :

- 1) The specks show up only in the CL1/VIO filter combination. The Lumogen coating was used primarily to enhance UV performance of the CCD.
- 2) There is history of a Lumogen coating problem where non-uniformity of the coating was shown to be related to patches of microcrystallite growth and void formation. This condition was traced back to contamination due to the packaging environment, and surface roughness of the CCD (Reference 2.14-1). It should be noted, however, that the ISS NAC and WAC flight CCDs were fabricated with consideration to these factors.
- 3) The pattern of the specks of low sensitivity corresponds with the pattern of non-uniformity seen earlier with the Lumogen coating investigation.

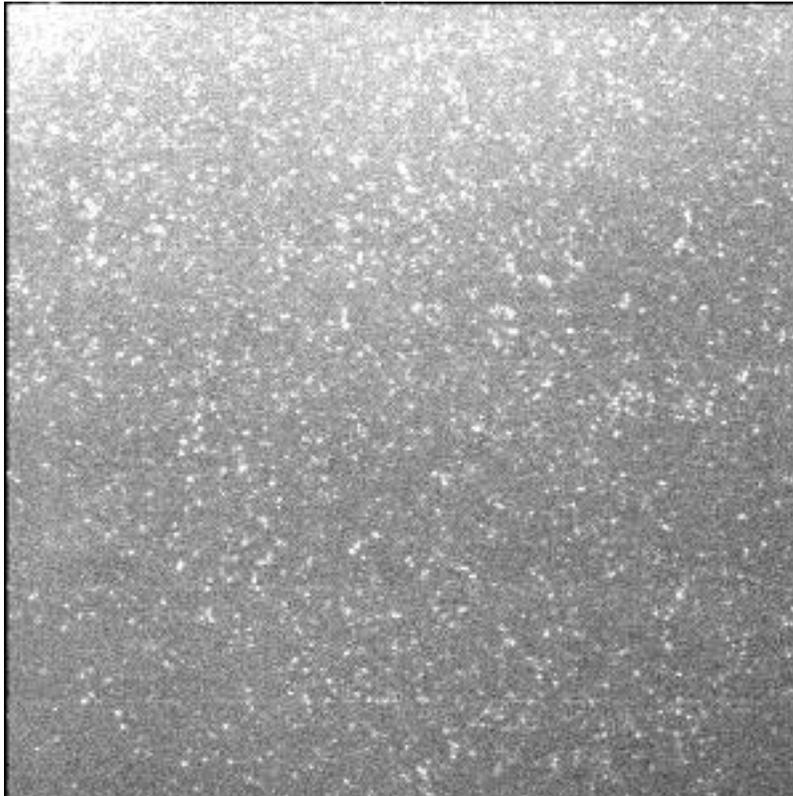


Figure 2.14-1 - WAC FM CL1/VIO Showing Bright Specks of Low Sensitivity